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Schwegman Lundberg Woessner & Kluth PA
P O Box 2938
Minneapolis, MN 55402

EXAMINER
TREAT, WILLIAM M

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

The reply filed on 12/2/02 is not fully responsive to the prior Office Action because:

The amendment filed on 10/21/02 canceling all claims drawn to the elected invention and

presenting only claims drawn to a non-elected invention is non-responsive (MPEP § 821.03). The

remaining claims are not readable on the elected invention.

Newly amended claim 10 and previously restricted claims 21-40 are directed to an

invention that is independent or distinct from the invention originally claimed. Since applicants

have received an action on the merits for the originally presented invention, this invention has

been constructively elected by original presentation for prosecution on the merits. Accordingly,

amended claim 10 and previous claims 21-40 were withdrawn from consideration as being

directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicants specification identifies the invention of their newly amended claim 10 and the

invention of previously restricted claims 21-40 as a distinct inventions from the original claims 1-

20.

On page 4, line 25 through page 5, line 3, applicants state: "Fig. 2A is a more detailed

block diagram of an example embodiment of the processor and firmware shown in Fig. 1. In one

embodiment of the invention, firmware 206 stores program code 210 for controlling the operation

of the processor 204. The programmed code 210 stored in the firmware 206 is referred to herein

as the 'firmware code.' In an example embodiment, the firmware code 210 implements

microcode operations using registers which are specific to a particular machine or to a particular

model of a machine. The registers are referred to herein as 'Machine Specific Registers.' The

machine specific registers function as an interface between the firmware 206 and the processor

204." Applicants claims 21-40 are all directed to the invention of the embodiment **requiring**

machine specific registers.

On page 6, lines 6-8, applicants state: "In still another embodiment, the external

microcode 222 implements microcode operations by a combination of using the registers shown in

Fig. 2A *(i.e., the machine specific registers)* and by directly triggering the processor hardware

logic." Amended claim 10, which effectively cancels original claim 10, is directed to the invention

of this third embodiment which also **requires machine specific registers**.

On page 5, line 25 through page 6, line 4, applicants state: "Fig. 2B is a block diagram of

an alternate embodiment of the processor shown in Fig. 1 and external microcode stored in a

computer readable medium. In one embodiment of the invention, a computer readable medium

220, which is external to the processor, stores program 222 for controlling the operation of the

processor 224. Examples of computer readable mediums external to the processor include, but

are not limited to, mass storage devices, firmware, and memory. The programmed code 222

stored in the computer readable medium is referred to herein as 'external microcode.' In an

example embodiment, the external microcode 222 implements microcode operations by

controlling hardware logic on the processor 224 **without the use of the registers (i.e., the**

machine specific registers) shown in Fig. 2A." Applicants' original claims were all directed to

the invention which "implements microcode operations by controlling hardware logic on the

processor 224 <u>**without the use of the registers (i.e., the machine specific registers)**</u> shown in Fig. 2A."

By consciously choosing to omit any mention of machine specific registers from any of applicants' original claims the applicants compelled the examiner to find art for and examine claims to the invention of the embodiment which "implements microcode operations by controlling hardware logic in the processor 224 <u>**without use of the registers (i.e., the machine specific registers)**</u> shown in Fig. 2A." <u>**Any art which used exclusively machine specific registers or used a combination of machine specific registers and direct triggering of the hardware by microcode to implement microcode operations would not have read on the invention of the embodiment which "implements microcode operations by controlling hardware logic in the processor 224 without use of the registers (i.e., the machine specific registers) shown in Fig. 2A."**</u> Therefore, applicants elected the invention of the embodiment which "implements microcode operations by controlling hardware logic in the processor 224 <u>**without use of the registers (i.e., the machine specific registers)**</u> shown in Fig. 2A" by original presentation.

Because these inventions are distinct for the reasons given above and the search required for amended claim 10 and previously restricted claims 21-40 was not required for the original claims, restriction for examination purposes as indicated was proper.

In response to the examiner's restriction applicants have argued that the language of

original claims 5, 6, 7, 11, 15, and 18 was directed to "machine specific registers", and therefore,

the examiner should not restrict their new claims specifically reciting "machine specific registers"

as being directed to the different invention as explained by the examiner in paragraph 2, *supra*.

The examiner notes that claims 5, 6, 7, 11, 15, and 18 were all canceled by applicants in response

to art that did not teach "machine specific registers". The cancellation of those claims in response

to art which did not teach "machine specific registers" is a tacit admission that applicants' original

claims were not directed to the alternative invention with "machine specific registers". The

examiner would also make clear that original claim 10 was canceled by applicants in response to

art which did not teach "machine specific registers". Though applicants have argued they still

have a claim 10, and a claim 10 was one of the original claims, they should understand that when

one amends a claim they have canceled the previous claim even though the new claim retains the

old number.

Applicants have also argued they have not seen a clear reason being given as to why the

examiner considers the two inventions to be distinct from each other. On the contrary, the

examiner carefully pointed out that **the invention of the first set of claims did not require**

machine specific registers and that this invention of applicants is specifically supported by their

disclosure where it states: "the external microcode 222 implements microcode operations by

controlling hardware logic on the processor 224 without the use of the registers (i.e., the machine

specific registers) shown in Fig. 2A." The examiner also pointed out that **each of applicants'**

new and amended claims now require machine specific registers and that these alternate

inventions are specifically supported by their disclosure where it states: "The machine specific

registers function as an interface between the firmware 206 and the processor 204" and where it

states: "In still another embodiment, the external microcode 222 implements microcode

operations by a combination of using the registers shown in Fig. 2A *(i.e., the machine specific*

registers) and by directly triggering the processor hardware logic."

Finally, applicants have argued that the language "registers associated with a logic unit" in

their original claims must mean "machine specific register" since machine specific registers are

associated with functional/logic units and, therefore, the examiner's restriction must be incorrect.

First, general purpose registers are "associated with" functional/logic units and are acted upon by

microcode as data is processed in modern computers. Second, instruction registers are

"associated with" functional/logic units and are acted upon by microcode as data is processed in

modern computers. One of ordinary skill in the art recognizes many "registers" and "types of

registers" are "associated with" functional/logic units in modern computers and are acted upon by

microcode as data is processed in such computers. The phrase, "associated with", is not a narrow

term in the art with a carefully defined meaning; rather, it is a nebulous phrase which merely

indicates that some undefined connection exists between a register or machine specific register

and a functional/logic unit. As a result, one can hardly argue with any credibility that because a

register is "associated with" a functional/logic unit it is by definition a machine specific register

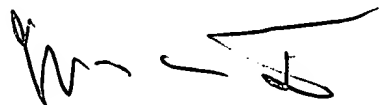unless applicants are also prepared to argue general registers, instruction registers, etc. are

machine specific registers. Unless applicants are making this last argument, the examiner's

restriction stands.

Since the period for reply set forth in the prior Office action has expired, this application

will become abandoned unless applicant corrects the deficiency and obtains an extension of time

under 37 CFR 1.136(a).

The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee

have been filed is the date for purposes of determining the period of extension and the

corresponding amount of the fee. In no case may an applicant reply outside the SIX (6) MONTH

statutory period or obtain an extension for more than FIVE (5) MONTHS beyond the date for

reply set forth in an Office action. A fully responsive reply must be timely filed to avoid

abandonment of this application.

A fully responsive reply could take several forms. Applicants may petition the examiner's

restriction. Applicants may amend their claims back to the original invention supplying arguments

why the new claims distinguish over the prior art. Applicants may file some form of continuation

with appropriate claims. Applicants may even abandon the prosecution of the present application.

WILLIAM M. TREAT
PRIMARY EXAMINER